

ABSTRACT

A non-aqueous secondary battery separator composed of a porous film made of an organic polymer, which  
5 includes a network-like support, swells in the electrolyte solution and retains the electrolyte solution, wherein the network-like support has a mean film thickness of 10-30  $\mu\text{m}$ , a basis weight of 6-20  $\text{g/m}^2$ , a Gurley value of no greater than 10 sec/100 cc, a McMullin  
10 number (25°C) of no greater than 10 and a (McMullin number x mean film thickness ( $\mu\text{m}$ )) product of no greater than 200  $\mu\text{m}$ , and the separator has a mean film thickness of 10-35  $\mu\text{m}$ , a basis weight of 10-25  $\text{g/m}^2$  and a Gurley value of no greater than 60 sec/100 cc, or exceeding 60 sec/100  
15 cc and no greater than 500 sec/100 cc. Both battery characteristics and safety are achieved by establishing a specific electrochemical relationship between the effective active substance content of the battery system and the overcharge-preventing function characteristic  
20 values.